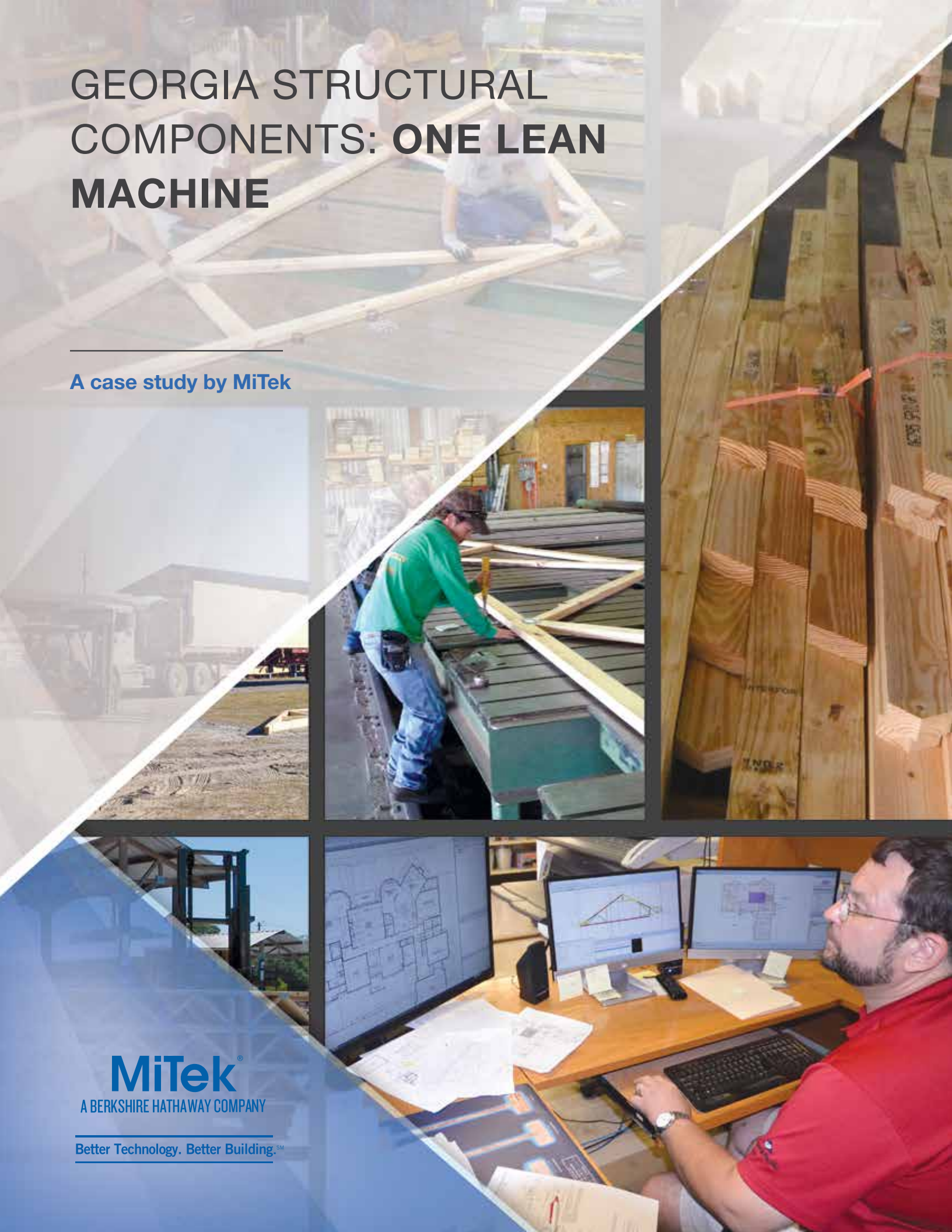
GEORGIA STRUCTURAL COMPONENTS: **ONE LEAN MACHINE**

A case study by MiTek



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Executive Summary:

- **In 2013 Georgia Structural Components processed 857,500 board feet of lumber stock into floor and roof trusses with just six workers. Georgia Tech helped implement the Company's lean processes.**
- **The Company sells trusses through (parent company) Short and Paulk's four locations and nine other lumberyards.**
- **For managing work and optimizing the wood frame, the Company uses MiTek's SAPPHIRE™ Suite, which can import PDFs of building plans, digitally picking up the perimeters and roof slopes.**
- **The Company also uses SAPPHIRE Viewer, MiTek's free collaboration tool that allows viewing of SAPPHIRE models in 3D.**
- **The Company runs MiTek's MBA® to sync sales with production. MBA tracks orders and offers sophisticated reporting, so workers can balance orders with capacity and production.**
- **The Company is seeing fewer stock plans, as houses go more custom, so SAPPHIRE's capability is essential to bid the work accurately and protect margins.**

If you ever want to see a lean truss manufacturing operation, just drive to Tifton, Georgia, in south central Georgia. That's where Hal Hand, VP of Manufacturing and Distribution for Georgia Structural Components runs a very tight operation indeed. Georgia Structural Components had a little help in tightening up its processes, Hand will admit, bringing in Georgia Tech to study and optimize their truss operations, through implementation of lean practices. The result is a model of efficiency. In 2013, Georgia Structural Components processed 857,000 board feet of lumber stock into floor trusses and roof trusses, with just a six-man crew working one shift, with weekends off. With a 100-mile shipping radius, Georgia Structural Components is

Georgia Structural Components had help to implement lean processes from Georgia Tech. The resulting manufacturing facility is a model of efficiency.

"If we have downtime on the floor truss table, I'm able to pull those guys over to cut and assemble roof trusses. But we are very careful not exhaust our guys. Everyone's kept busy, but no one gets burned out, which is essential for a lean operation like ours, and it's equally essential for safety."

With a real focus on residential wood frame structures, Georgia Structural Component's jobs break out 74% residential, 21% commercial, and 5% agricultural; building sizes average 2,600 square feet.

actually the truss division of Short and Paulk Supply Company, a four-location lumberyard company, which also distributes Georgia Pacific engineered wood products (mostly iJoists and LVLs). With a real focus on residential wood frame structures, Georgia Structural Component's jobs break out 74% residential, 21% commercial, and 5% agricultural; building sizes average 2,600 square feet.

Georgia Structural Components works out of a facility with one half acre under cover (22,000 square feet), including two 120-foot buildings where the lumber is stored out of the weather. Georgia Structural Components runs one trucks for truss deliveries, with access to more trucks, when needed from the lumberyard side of the business. If Georgia Structural Components ever needs more space for storage or future expansion, it shares 10 acres with Short and Paulk.

Georgia Structural Components runs a roof truss assembly table in one building and a floor truss assembly table in another. They keep their workers hopping, often sharing workers across the two assembly areas; every worker is cross-trained for roof and floor trusses.

"I started in the truss business in 1982, long before the availability of the sophisticated software we use today from MiTek," says Hal D. Hand. "Back then, for truss design, the 'high tech' system we used was a little computer loaded with thermal paper. We'd load in our spans and upload it to a computer in Miami using a modem. An hour later, we downloaded and printed out the truss specs, which we'd interpret on the make-up table."

"If we have downtime on the floor truss table," Hand explained, "I'm able to pull those guys over to cut and assemble roof trusses. But we are very careful not exhaust our guys. Everyone's kept busy, but no one gets burned out, which is essential for a lean operation like ours, and it's equally essential for safety."

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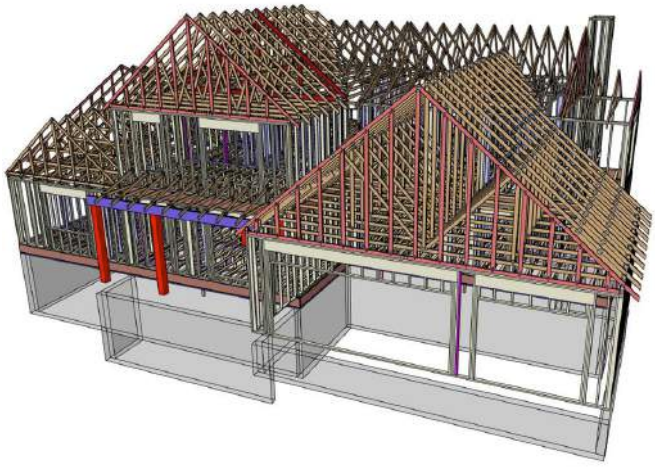
Software is Central to Operations

"To get an idea of the scope of sales, and what we ask our SAPPHIRE software to do, note that we sell trusses to the customers at Short and Paulk's four locations and we also wholesale through nine other lumberyards. That's 13 locations where we sell trusses, yet we are able to do it with a very lean staff," Hand said. "For managing all of this work at the design and production levels, we depend on SAPPHIRE – there's no better tool out there for optimizing the wood frame. And for customer relations and sales, we depend on SAPPHIRE Viewer, MiTek's collaboration tool that allows viewing of SAPPHIRE models in 3D. SAPPHIRE Viewer has allowed us to keep our headcount low, because I can email 3D images of a truss job, long before it even gets on the make-up table, and I'll get a complete review by the customer, who can fly through the structure and zoom in and out on details. He can comment on the drawing, without actually changing it, and request changes. We can take changes up to one week before production. Since SAPPHIRE Viewer is such a great display tool, and it's free, even our contractor customers have downloaded it. They are using it as a sales tool with their clients, showing them exactly how the house or structure will look," Hand said.

How Plans Are Imported

"We get plans in all kinds of ways," Hand said. "We get hand-drawn plans. People actually still phone in some orders. We get CAD files. We get emailed PDFs, and we still get rolled paper plans, which we scan with a bed scanner, eliminating the massive pile of plans that was clogging up our office. When we go to production, all the plans are digitized by that point. One of the great things about SAPPHIRE is that we can import PDFs of building plans, digitally picking up the perimeters and roof slopes. So, even when we get just a PDF, it doesn't slow us down; we don't need the full CAD file, which is great for the designers and architects who don't want us opening their original files," Hand said. "Since we are seeing fewer and fewer stock plans, as houses go more custom, this capability in SAPPHIRE is essential to our ability to bid the work accurately and protect our margins."



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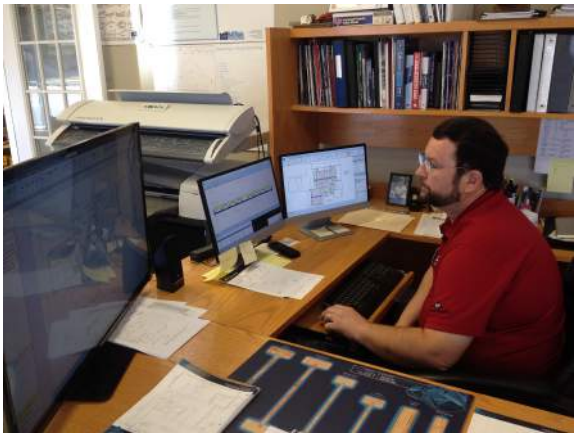

"MiTek's MBA tracks orders and offers sophisticated reporting that gives me an overview of where we are, as we balance orders with capacity and production. When we take in a truss order, the salesman logs in the essential information, and I can get that order right into the workflow. But the best thing about MBA is that I can run reports that compare one customer to another," explains Hal Hand.

MBA Offers Insight on Sales and Margins

"We also run MiTek's MBA® to sync sales with production," Hand explains. "It tracks orders and offers sophisticated reporting that gives me an overview of where we are, as we balance orders with capacity and production. When we take in a truss order, the salesman logs in the essential information, and I can get that order right into the workflow. But the best thing about MBA is that I can run reports that compare one customer to another. I can see what margins we are achieving with each dealer. For those in competitive markets, where we have to bend a little on price, I can see where we are at risk of a loss and adjust the margin accordingly. We are heavily dependent on MBA to manage and optimize our profitability. It's key to our success," Hand added.

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About Georgia Structural Components and Short and Paulk

Georgia Structural Components is a division of Short & Paulk Supply Company. Short & Paulk was founded in 1941 by J.P. Short III and H.M. Paulk in an old warehouse along the railroad tracks on South Main Street in Tifton, GA. Our first phone number was 97. Short & Paulk always has sold building materials, but in the early days they were also heavily involved in the agricultural supply business, selling tractors, farm implements, feeds, seeds, and fertilizers. Short & Paulk was also a distributor for Diamond-T trucks.

Short and Paulk currently has 3rd generation family members involved in Management. J.P. (Jay) Short V is the President and CEO.

We have changed a lot since opening with only 3 employees. We now operate 4 Lumberyard - Home Centers, Short & Paulk in Tifton, Sylvester, Albany, and Dawson. In addition we operate Georgia Structural Components a Truss Manufacturing Plant in Tifton and a Door Assemble shop in Tifton. Short & Paulk currently employs over 60 full and part-time employees.

Explore **BuildabilityNow.com** to learn more.